REMARKS

This is in response to the Office Action dated January 3, 2008. In view of the foregoing amendments and following representations, reconsideration is respectfully requested.

By the above amendment, claims 1-45 are cancelled; and claims 46-63 are newly presented. Thus, claims 46-63 are currently pending in the present application. Note that each of the new claims reads on the invention that was elected in response to the restriction requirement of March 19, 2007.

With regard to the Examiner's statements under the heading "Information Disclosure Statement", as instructed in MPEP 1893.03(g), the Examiner will consider documents cited in an International Search Report, without further action by applicant under 37 CFR 1.97 and 1.98, when both the international search report and copies of the documents are present in the National Stage file. In this case, the necessary documents were present in the file, and thus the Examiner was obligated to consider the references cited in the International Search Report. Further, since there is no requirement for the Examiner to list the documents on a PTO-892 form, Applicants supplied a PTO-1449. Accordingly, the IDS fee, submitted with the previous response, was not required.

Next, on page 3 of the Office Action, the Examiner objects to the abstract based on the length thereof. Accordingly, a substitute abstract in compliance with MPEP 608.01(b) is submitted herewith. Also, a copy of the abstract, with the changes marked therein, is attached and entitled *"Version with Markings to Show Changes Made."*

Next, on page 3 of the Office Action, claims 14, 17 and 18 are objected to based on minor informalities. As noted above, these claims have been cancelled.

Next, on pages 4-5 of the Office Action, claims 3, 8-17, 22 and 25-27 are rejected under 35 U.S.C. 112, second paragraph. As noted above, each of the rejected claims has been cancelled. The new claims have been drafted to avoid the rejections of the previously presented claims under 35 U.S.C. 112, second paragraph. In particular, claims 47, 53, 56 and 62 recite "an overall oxygen permeability quantity through the gas permeable region to an entire cell reservoir section of the cell handling device is 1 mL/24 hr atm or more." This language clearly requires that the gas permeable region be capable of permitting at least 1 mL/24 hr atm of oxygen to permeate the gas permeable region. Accordingly, one of ordinary skill in the art would understand what is being claimed in clams 47, 53, 56 and 62.

Next, on page 5-14 of the Office Action, the previously presented claims are rejected over the prior art with the Examiner particularly relying on Pickhard (U.S. Patent No. 5,147,311), Baidwan (U.S. Patent No. 4,299,238), Karakashian (U.S. 3,937,219), and Polak (U.S. 5,114,421).

It is submitted that the present invention, as embodied by the newly presented claims, now clearly distinguishes over the applied prior art references for the following reasons.

Independent claim 46

New independent claim 46 requires, *inter alia*, "a plunger that is slidably insertable into the main body such that the handling medium can be transplanted into a living body by applying a pushing force to the plunger . . . . . wherein at least part of a tip of the plunger that contacts the fluid handling medium, when the vessel holds the handling medium, is a gas permeable region for passing a quantity of gas necessary for survival of the cells."

In the present invention, as defined in claim 46, a gas permeable region is provided in the plunger. (Note, this feature was previously recited in claim 23.) Accordingly, when an operator operates the plunger while the syringe portion, which is in proximity to the plunger, is pointed upward, bubbles and gas in the handling medium are concentrated naturally in proximity to the plunger. This is particularly advantageous because the process of discharging bubbles and gas is extremely easy (as described in connection with the third embodiment).

Baidwan discloses a syringe for taking blood samples including a piston 20 that is detachably fastened onto head 22 of pushrod-type plunger 24. The piston 20 is formed of rubber or other elastic material and includes a hollow one-piece body 60 having an upstream annular rib 62 and a downstream annular rib 64 separated by a medial portion 66 of reduced cross section. A plurality of slits are provided around the periphery of the rib 62, and a slit 74 is provided in medial portion 66 to connect the space between ribs 62, 64 with fluid collection chamber 78 in the hollow interior of the piston. Note, as described in col. 7, lines 2-12, when retracting the piston subassembly 14 (see Fig. 6) both a fluid-tight and an air-tight annular seal must exist at the interface between surface 56 and 82. Thus, no portion of the piston 20 is formed of an air permeable material. This is apparent because slits have to be provided to permit air to pass the piston structure, and when an air passage is not formed in the piston, the piston material forms an air-tight seal. Thus, Baidwan does not disclose or suggest the limitation of claim 46 that requires that "a part of a tip of the plunger that contacts the fluid handling medium, when the vessel holds the handling medium, is a gas permeable region for passing a quantity of gas necessary for survival of the cells. Therefore, Baidwan does not disclose a structure in which the interior and the exterior of the syringe are in communication with each other.

And thus, claim 46 is allowable over the collective teachings of the Pickhard, Karakashian, Polak and Baidwan references.

Further, claims 47-54 depend, directly or indirectly, from claim 46, and are therefore allowable at least by virtue of their dependencies.

Independent Claim 55

The present invention, as defined in claim 55, requires, *inter alia*, that "a discharge part is formed at a surface of the vessel that makes contact with the plunger when the plunger is in a fully pressed state, and at least part of the surface that contacts the handling medium, when the vessel holds the handling medium, is a gas permeable region for passing a quantity of gas necessary for survival of the cells, and at least a part of the gas permeable region is formed in the surface of the vessel that makes contact with the plunger when the plunger is in the fully pressed state."

Accordingly, a gas permeable region is formed in the surface of the vessel that makes contact with the plunger when the plunger is in a fully pressed position and is located in the vicinity of the discharge part which is for discharging cells. Thus, if an operator pushes the plunger towards the discharge part while directed upwardly, bubbles and gas in the fluid medium will move to, and be discharged from, the gas permeable region (as described in connection with the second embodiment).

The effect of facilitating efficient gas circulation in conjunction with movement of the plunger can be realized only by providing the gas permeable region in the region located the surface of the vessel that makes contact with the plunger when the plunger is in the fully pressed state, and not simply by providing the gas permeable region at side surfaces of the syringe main body. Note that the above-described feature of claim 55 was previously recited in claim 25.

Karakashian discloses a syringe assembly for injecting sterile air into a patient. As described in col. 3, lines 44-51, both package enclosure 8 and barrel 7 of syringe 4 are formed of an ethylene oxide permeable material such as plastic. Thus, in a sterilization process, syringe assembly 1 is inserted in package enclosure 8, which is then placed in a sterilizing gas environment. Since the enclosure 8 and barrel 7 are gas permeable, the sterilizing gas passes internally to the syringe assembly 1. Accordingly, the entire cylindrical barrel 7 (see Fig. 2) of Karakashian is formed of a gas permeable material. However, there is nothing in the disclosure of Karakashian that would suggest locating the gas permeable region in the location specified in claim 55. In other words, claim 55 requires that the gas permeable region be provided in the surface of the vessel that makes contact with the plunger when the plunger is in the fully pressed state, and this surface also includes the discharge part. Clearly, Karakashian does not disclose or suggest a gas permeable region located in the region specified in claim 55.

Polak discloses a medicament container/dispenser assembly in which a gas permeable region is provided in part of the side surfaces and the end portion of a syringe main body (see Figs. 6-9). However, the gas permeable regions of Polak are provided to merely facilitate pressure equalization inside and outside of the syringe (see col. 7, lines 6-11). Accordingly, Polak lacks a structure having permeable regions provided in the surface portion of the syringe main body to take in gas from outside for cell respiration or to discharge unnecessary gas, bubbles and the like. Also, neither of the Baidwan or Pickhard references discloses a structure in which a gas permeable region is provided in a surface of the syringe the makes contact with the plunger when the plunger is in a fully pressed state.

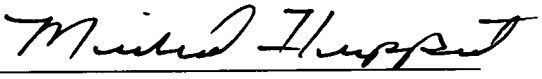
Therefore, even if the four applied prior art references could be combined as suggested by the Examiner, the resulting syringe device would include a gas permeable region formed over the entire surface or the sides surfaces of the syringe main body to permit gas circulation for internal sterilization. Thus, the collective teachings of the references would not result in an arrangement having a gas permeable region in the specified location for the purpose of permitting efficient bubble elimination in conjunction with movement of the plunger. Thus, it is submitted that claim 55 is clearly allowable over the prior art of record. Claims 56-63 depend, directly or indirectly, from claim 55, and are therefore allowable at least by virtue of their dependencies.

In view of the above, it is submitted that the present application is now clearly in condition for allowance. The Examiner therefore is requested to pass this case to issue.

In the event that the Examiner has any comments or suggestions of a nature necessary to place this case in condition for allowance, then the Examiner is requested to contact Applicant's undersigned attorney by telephone to promptly resolve any remaining matters.

Respectfully submitted,

Rui YUGE et al.

By: 

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April 3, 2008